### University of Iowa Department of Ophthalmology and Visual Sciences at ARVO 2021

**Saturday, May 1**

3:45 PM – 4:00 PM  
**Live Paper Discussion**

*Live Discussion: Retinal Organoids: Cell Diversity and New Strategies.* **Budd Tucker**, PhD

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**Monday, May 3**

10:15 AM – 11:45 AM  
**Paper Session: Regulating Endothelial Cell Homeostasis**


**Poster Session: Drug Delivery and Gene Therapy**

*Subretinal gene replacement rescues retinal phenotype in BBS10 mouse.* Arlene V. Drack, Angela Mahoney, Sajag Bhattarai, Sara Mayer, Jacintha Thomas, Poppy Datta, Ying Hsu, Janelle Garrison, Elise Heon, Charles Searby, Luk H. Vandenbergh, Seongjin Seo, Val Sheffield

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**Tuesday, May 4**

9:15 AM – 11:00 AM  
**Poster Session: Corneal Endothelium**

*Examining the relationship between injector lumen diameter and exposed endothelial surface area and tissue conformation of DMEK tissue scrolls.* Yong Kam, Gregory Schmidt, Mark A. Greiner, Jennifer Ling, Christopher Sales
### Paper Session: Gene Therapy in Ocular Diseases

**Development and biological characterization of a clinical gene transfer vector for the treatment of MAK-associated retinitis pigmentosa.**

Budd A. Tucker¹, Erin R. Burnight¹, Cathryn M. Cranston¹, Jessica L. Fick¹, Austin J. Reutzel¹, Melette R. Devore⁵, Trudi Westfall², C. Anthony Scott², Autumn Marsden², Katherine N. Gibson-Corley³, Luke A. Wiley¹, Ian Han¹, Diane Slusarski², Robert F. Mullins¹, Edwin M. Stone¹

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### Poster Session: AMD and Retinal Disease Epidemiology

**BBS10 knockout mouse exhibits developmental lack of cone function and recapitulates retinal degeneration.**

Sara Mayer¹², Jacintha Thomas¹², Angela Mahoney¹², Sajag Bhattarai¹², Qihong Zhang¹², Elliot Stalter¹², Poppy Datta¹², Ying Hsu¹², Janelle Garrison¹², Charles Searby¹², Seongjin Seo¹², Val Sheffield¹², Arlene V. Drack¹²

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### Wednesday, May 5

4:00 PM – 5:30 PM

**Special Interest Group**

*Is the Current Staging System for Diabetic Retinal Disease still relevant in 2021?*

Michael Abramoff, MD, PhD

**Special Interest Group**

*Deciphering the molecular landscape of retinal regeneration and degeneration using single cell genomics.*

Robert Mullins, MS, PhD

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### Thursday, May 6

3:10 PM – 3:25 PM

**Minisymposium**

Central neuropathic contributors to ocular surface pain.

Randy Kardon, MD, PhD

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### Thursday, May 6

3:12 PM – 3:26 PM

**Minisymposium**

Transcriptomic heterogeneity of choroidal cells in aging and disease.

Robert Mullins, MS, PhD

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### Friday, May 7

1:15 PM – 4:45 PM

**Paper Session: Genetics of Retinal Dystrophies**

**Mutational burden of mt3243G in blood correlates with the age of onset of retinal symptoms.**

Nathaniel K. Mullin¹, Kristin R. Anfinson¹, Louisa M. Affatigato¹, Jeaneeen L. Andorf¹, Megan J. Riker¹, Robert F. Mullins¹, Edwin M. Stone¹, Budd A. Tucker¹

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### Paper Session: Stem Cells/Gene Therapy/Transplantation

**Safety and efficacy of sepofarsen in the second treated eye in a Ph1b/2 extension trial in Leber Congenital Amaurosis type 10 (LCA10).**

Stephen R. Russell¹, Arlene V. Drack¹, Artur V. Cideciyan²³, Samuel G. Jacobson²³, Bart Leroy⁴⁵, Allen Ho⁶, Caroline Van Cauwenbergh⁷, Arun k. Krishnan²³, Wilhelmina R. den Hollender⁷, Adriana Hollestein-Havelaar⁷, Mike Schwartz², Aniz Girach⁷

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### Friday, May 7

1:15 PM – 4:45 PM

**Paper Session: Applications of Single-Cell RNA-SEQ and Transcriptome Studies to Retinal Cell Biology**

**Single-cell RNA sequencing identifies unique gene expression patterns in the foveal and perifoveal human retina.**

Andrew P. Voigt¹, Nathaniel K. Mullin¹, S S. Whitmore¹, Todd E. Scheetz¹, Edwin M. Stone¹, Budd A. Tucker¹, Robert F. Mullins¹